

PROCEEDINGS
OF THE
BIOLOGICAL SOCIETY OF WASHINGTON

SOME NEW AMPHIBIA SALIENTIA.

BY THOMAS BARBOUR.

Among material selected from the stock of Mr. Owston, in Yokohama, was the remarkable new frog described below. Unfortunately it bears no very definite data. The other two new forms were both taken by the author, while on a collecting trip in 1906-'07.

***Rana subaspera* sp. nov.**

This specimen was sent to Dr. Stejneger for examination. His letter, confirming the surmise that it was undescribed, says: "It is * * * probably nearest related to *Rana feae*, and also to *Rana liebigii* and *Rana boulengeri*." He then calls attention to the enormously developed first metacarpal, "somewhat recalling that of *R. holsti*, with which species, however, the present one has nothing to do." He adds: "The large gland above the axil is also very remarkable."

Description.—Vomerine teeth in two small oblique groups, situated very slightly behind the choanae. The distance between these is a little less than their distance from the choanae. Habit rather stout. Head much broader than long; snout very short, well rounded; no canthus rostralis; nostril much nearer tip of snout than eye; interorbital space narrower than upper eyelid; tympanum distinct, three-fourths the diameter of the eye. Fingers moderate, first much longer than second; first metacarpal very greatly developed (similar to *R. holsti*); toes rather long, entirely webbed; subarticular tubercles well developed; tips of fingers and toes slightly dilated; inner metatarsal tubercle narrow and elongate, two-thirds the length of the inner toe; outer metatarsal tubercle indistinct; no inner tarsal fold. The tibiotarsal articulation reaches the eye; tibia one-half the length of the body.

Body warty, all upper parts and sides of body and limbs with many round, prominent warts. No fold from eye to shoulder as in *R. feae*. A large kidney-shaped gland above each axil. Uniform olive brown on all upper surfaces and sides; tympanum lighter; under surfaces chestnut brown with olive marblings. Male without internal vocal sacs. The type, a male, evidently taken in the breeding season, has light-colored spine-

like asperities on the two inner figures; there are, as in *R. liebigii*, asperities on the inner side of the arms and unlike that frog, these are plentifully sprinkled over the entire chest and throat region to the very edges of the lips.

Type, No. 2440 of the Amphibian collection in the Museum of Comparative Zoölogy. Taken in the Rin Kiu Islands, May, 1904, by a Japanese collector of Mr. Alan Owston.

***Cornufer corrugatus rubristriatus* subsp. nov.**

Description.—These two examples, one of which has been figured in the life colors (for a general account of my collection), seem to differ rather widely from typical *C. corrugatus*.

They both lack the characteristic dermal fold which extends from the eye to the shoulder. The tympana are round instead of vertically oval, there are three palmar tubercles, and the tibiotarsal articulation only reaches the eye. The inner sides of the thighs are yellow, and down the brownish olive back runs a brick red vertebral stripe.

In other characters there does not occur any such divergence. It seems best to consider this a localized island race, and not a distinct species; though more specimens of various ages and from a number of localities might completely separate this race or possibly invalidate it altogether.

Types, No. 2441, Museum of Comparative Zoölogy. Two specimens from Roon Island, Geelvink Bay, Dutch New Guinea. T. Barbour, collector.

***Ixalus pallidipes* sp. nov.**

Description.—Snout rounded, as long as diameter of orbit; canthus rostralis moderately distinct; loreal region slightly concave; nostril slightly nearer tip of snout than eye; interorbital space broader than upper eyelid; tympanum very small, round, rather indistinct, one-fifth diameter of eye. Fingers free, toes not quite half webbed; disks prominent, larger than tympanum; subarticular tubercles small, a small elongate inner metatarsal tubercle. The hind limb being carried forward along the body, the tibiotarsal articulation reaches beyond the tip of the snout. Skin minutely granular above; beneath both throat and belly more coarsely granular. Upper surfaces uniform brown, varying from dark reddish to grayish. Palms of hands and ends of toes yellow. Throat so heavily punctulate with dark brown as to appear almost of solid color, belly and inner sides of limbs less heavily specked on a yellow ground. Outer sides of thighs barred with very deep brown.

Type, No. 2442, Museum of Comparative Zoölogy, from near the summit of the volcano Pangerango, Java. T. Barbour, collector.

The small size (body 1 inch long for nearly adult female), lack of cranial ossification, and absence of vomerine teeth place this form with the genus *Ixalus*. The fact, however, that two species of *Polyypedates* have been discovered, viz. *P. edentulus* (F. Müll), and *P. anodon* (Van Kampen), which also lack vomerine teeth, shows how scant is the basis of separation for the two genera. Cranial ossification is unknown in *Ixalus*, and, of course, is not general in *Polyypedates* so that the adult size alone stands as the generic distinction. A very slim one surely.